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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,403	09/16/2004	Alfred Albert Mancini	13DV-13098-3	5402

30952 7590 07/18/2006

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EXAMINER	
AUSTIN, AARON	
ART UNIT	**PAPER NUMBER**
1775	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/711,403	MANCINI ET AL.	
	Examiner	Art Unit	
	Aaron S. Austin	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffinberry (U.S. Patent No. 5,891,584) in view of Hikino (Japanese Patent No. 356030514A), and further in view of Priceman (EP 0304176 A2).

Coffinberry teaches a hydrocarbon fluid containment articles through which hydrocarbon fuels flow wherein the surface for contacting the fluid is a diffusion barrier material, a catalytic material, or combination thereof coated on a metal substrate, such as aircraft turbine engines components including heat exchangers (column 4, lines 28-36). The diffusion barrier inhibits interdiffusion and catalyzes thermal decomposition of the fuel to promote formation of a loosely-adherent or substantially non-adherent coke (column 11, line 49 through column 12, line 54). The diffusion barrier may be a ceramic, such as tantala, silica, or other oxides, and may be overlayed with the catalytic material (column 11, lines 11-34; column 19, line 55; and claim 6). Thicknesses of the diffusion barrier layer range from about 0.1 to 5.0 microns (column 13, lines 40-56). One example was conducted using jet fuel at 700 F (371 °C), the equivalent of about 345 °C (column 19, lines 43-48).

Coffinberry does not teach the catalytic material as being platinum nor a second coating system on an opposing surface of the substrate.

Coffinberry does discuss prior art, namely Hikino, wherein fuel tar collecting on a surface coated with platinum may be removed when heated to 350 °C for an hour (column 3, lines 40-50 of Coffinberry). Therefore, as Hikino clearly teaches platinum is an effective catalytic material useful for prevention of adhesion of fuel tar to a surface, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use the platinum layer of Hikino as either the catalytic material or in association with the catalytic material of Coffinberry overlaying the diffusion barrier layer.

Neither Coffinberry nor Hikino teach a second coating system on an opposing surface of the substrate.

Priceman teaches a coated metal composite article, such as a gas turbine engine (column 3, lines 6-7), including afterburner nozzles thereof (column 1, line 46). Opposite surfaces of the substrate have an intermetallic layer and ceramic layer thereon (column 4, lines 47-49; Figure 1) imparting "improved operating temperature and life capabilities at temperature and, where necessary, improved resistance to premature catastrophic failure resulting from chemical/metallurgical reactions with other materials" (column 2, lines 44-50). Therefore, as it is clearly taught by Priceman that forming a coating on either surface of the substrate provides improved life capabilities and resistance to failure, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply coatings to both surfaces of the substrate

taught by Coffinberry in view of Hikino with a reasonable expectation of success. Thus the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

Regarding claim 16, Priceman teaches the single step of application of an intermetallic layer to both sides of the substrate prior to the subsequent step of heating of the coated substrate (column 5, lines 40-43). It would be obvious to one of ordinary skill in the art to apply the layer to both sides simultaneously. Please note, claim 16 includes product by process language. The above arguments establish a rationale tending to show the claimed product is the same as what is taught by the prior art. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 227 USPQ 964,966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113.Thus the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

Regarding claim 17, neither Coffinberry nor Hikino teach the outermost layer as having a roughness. However, the layer thicknesses of the layers are taught in which roughness could not exceed one micrometer as this would exceed or equal the thickness of the layers themselves. Therefore, it is fully expected that the coating will have a roughness not greater than about one micrometer.

Response to Arguments

Applicant's arguments, see Remarks, filed April 18, 2006, with respect to the specification, claim objections, double patenting rejection, and rejection under 35 USC 102 have been fully considered and are persuasive in light of the amendments. The objections to the specification and claims as well as the double patenting rejection and rejection under 35 USC 102 have been withdrawn.

Applicant's arguments on the basis of 35 USC 103 with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron S. Austin whose telephone number is (571) 272-8935. The examiner can normally be reached on Monday-Friday: 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASA

JENNIFER C. MCNEIL
SUPERVISORY PATENT EXAMINER
6/29/06